DOCUMENT RESUME

ED 291 467 PS 017 111

AUTHOR Denham, Susanne A.; Couchoud, Elizabeth
TITLE Young Preschoolers' Ability To Identify Emotions in Equivocal Situations.
PUB DATE Aug 87
NOTE 20p.; Paper presented at the Annual Meeting of the American Psychological Association (New York, NY, August 28-September 2, 1987).
PUB TYPE Reports - Research/Technical (143) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Age Differences; *Cognitive Ability; *Difficulty Level; Egocentrism; *Emotional Experience; *Identification; Individual Development; *Preschool Children; Puppetry; Research Methodology
IDENTIFIERS *Emotions

ABSTRACT

To investigate the ability of young children to perceive the feelings of others, 44 preschool children with a mean age of approximately 3 years, 8 months were shown 12 vignettes in which a puppeteer emitting facial and vocal cues twice contrasted all possible pairs of happy, sad, angry, and afraid emotions. Mothers completed a questionniare containing narratives of all 12 vignettes and indicated the affective behavior that they thought their child would express in the depicted situations. In the performance of vignettes, a puppet of the same sex as the subject represented the emotion that differed from the emotion mothers had indicated their child would have. Children were asked: "How does the puppet feel?" To answer, children selected one of two cloth faces representing differing emotions and affixed it to the puppet. It was hypothesized that subjects would show a greater than chance ability to use personalized information about the puppet, rather than relying on their own experience, and it was expected that such ability would be age-related. In addition, personalized information was expected to be more readily used by preschoolers when the puppet's and their own emotions differed along positive or negative dimensions, and when certain pairs of emotions were contrasted. Findings supported each of these hypotheses. (RH)

**********
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
**********

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

X This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.



# Young Preschoolers' Ability to Identify Emotions in Equivocal Situations

Susanne A. Denham

Elizabeth Couchoud

George Mason University

ED291467

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY
Susanne A. Denham
TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

An earlier version of this paper was presented at the Annual Meetings of the American Psychological Association, August 26, 1987. Reprint Requests can be sent to the first author at the Department of Psychology, George Mason University, 4400 University Drive, Fairfax VA, 22030.

Running Head: EMOTION KNOWLEDGE IN EQUIVOCAL SITUATIONS

PS 017111



BEST COPY AVAILABLE

ABSTRACT

Young childrens' ability to perceive others' feelings has previously been assumed to be limited. It is predicted, however, that preschoolers will show a non-chance ability to use personalized information about others' emotions. This ability will be age-related, and greater where: (1) the other's and their own emotions differ along positive/negative dimensions; (2) certain pairs of self/other emotions are contrasted. 44 preschoolers were presented puppet vignettes; all possible pairs of happy, sad, angry, and afraid emotions were contrasted. The puppet felt differently than mothers had predicted their children would. Personalized information was needed to correctly indicate the puppet's feelings. Each hypothesis addressed above was supported.

# Young Preschoolers' Ability to Identify Emotions in Equivocal Situations

Young childrens' ability to perceive others' feelings has long been assumed to be limited due to cognitive immaturity and egocentrism (Chandler & Greenspan, 1971). In recent years, however, this assumption has been challenged by use of more contextually valid measurement tools, and more careful sub-analyses of the abilities involved in such affective sensitivity (Author, 1986a, 1986b; Gnepp, McKee, & Domanic, 1985).

Earlier research on young preschoolers' emotion knowledge suggests that young preschoolers can identify basic emotion expressions (e.g., happy, sad, angry, and afraid). By the end of the preschool period they can also quite easily identify the linkage between emotion expressions, situations which unequivocally cause emotion (e.g., being happy to receive an ice cream cone), and the consequences of such emotional expression (Author, 1986a, 1986b, 1987, Gnepp, 1987; Masters & Carlson, 1984; Michalson & Lewis, 1985; Stein & Jewett, 1986; Strayer, 1986). Happy expressions and situations are more readily identified than negative expressions or situations, particularly fear.

Current research also portrays younger children as beginning to identify other persons' emotions, even when

their own reactions might reasonably differ (Author, 1986a, 1987; Gnepp, 1983; Gnepp et al., 1985). Gnepp (1983; Gnepp et al, 1985) reports that this ability increases with age, from kindergarten through elementary school.

The discovery of these abilities points to a need for more detailed investigation of preschoolers' capabilities to identify protagonists' emotions from expressive cues, specifically in equivocal situations. Situations are considered equivocal where any child could conceivably feel one of two possible emotions (e.g., one could reasonably be afraid or quite happy to enter the water at a swimming pool, depending on personal experience and preference). It is predicted that the ability to use personalized information in such situations will exceed chance expectations in young preschoolers, and that, even within a restricted age range, this ability will increase with age.

It is important to examine children's abilities to identify others' emotions in equivocal situations across several different emotions, since earlier research supports a discrete emotions view (i.e., that some emotions would be more difficult to understand than others, due to the differential communicative value of each; Izard, 1971). Thus, given young preschoolers' advanced understanding of happiness relative to negative emotions, is expected that

another's point of view in equivocal situations where happiness and negative emotions are contrasted will be easier for these young preschoolers to discern than in those where two negative emotions are possible.

Of the emotions mentioned above, fear is the most difficult for preschoolers to correctly identify. Therefore it would be reasonable to assume that when the comparison of children's own emotional experience and those of others includes the emotion of fear, the nascent ability possessed by preschoolers will break down. This will be true whenever fear is a possibility, whether in equivocal situations where happiness and fear, or fear and another negative emotion, are involved.

In this study three hypotheses were therefore addressed. First, preschoolers will show a greater than chance ability to use personalized information, and this ability will be age-related. Egocentric errors will be most common where the least-comprehended emotion, fear, is contrasted with other emotions. Next, personalized information will be more readily used by preschoolers where: (a) the protagonist's and their own emotions differ along positive/negative dimensions (as in the example above; that is, if both their own and protagonist's emotions were negative but different, the distinction would be more

difficult that if one felt positive and the other negative); and (b) certain pairs of emotions are contrasted (e.g., happy versus sad as compared to happy versus fear), whether due to developmentally-appropriate difficulty in actually identifying emotions, or in differentiating among negative emotions.

## Method

### Subjects

The sample consisted of 44 preschoolers, mean age 44.68 months. They attended two classrooms in a university laboratory preschool in a suburb of a major metropolitan area.

### Measures and Procedures

Subjects' mothers filled out a questionnaire on which the vignettes for the puppet measure to be described below were narrated. They circled the emotional reactions that they predicted their child would show (e.g., happy versus sad at going to the airport to see a parent off on a business trip, sad versus angry when other children rebuff the protagonists' attempts to join play). The situations were planned to be equivocal--that is, one could conceivably feel one of two ways in response to each event.

Children were escorted to a quiet area by a female tester whom they knew well. They were presented with twelve vignettes via puppetry, with the puppeteer emitting facial

and vocal emotion cues. All possible pairs of the emotions happy, sad, angry, and afraid were each contrasted twice in random order.

The same-sex puppet felt differently than the reactions mothers had predicted for their children, so that personalized information was needed to respond correctly to the question of "how does the puppet feel?". Children affixed a felt face with the appropriate emotional expression on the puppet (from a choice of happy, sad, angry, and afraid). They received 1 point for a correct response, and 0 points for a response either in the incorrect dimension or their own probable emotion. The pair of items for each emotion contrast were summed, yielding six scores per subject.

The expressions on the detachable faces have been validated with a sample of 41 adults. This measure has also been specially attuned to maximize contextual validity. For example, the puppeteer's use of standard facial and vocal expressions of emotions during each vignette increases children's understanding; further, certain emotions, such as surprise and excitement, were excluded because their inclusion can be confusing procedurally for children, and redundant in terms of results.

## Results

### Hypothesis One: Overall Ability to Discern Equivocal Situations

The average proportion of correct scores for each subject (.67) on the puppet measure was significantly greater than that expected by chance [$t$ (43) = 12.00, $p$ < .001]. Scores were also related to age ($r$ (43) = .39, $p$ < .01). Table 1 shows scores' means and standard deviations for each pair of items, representing all possible emotion pair contrasts.

---

Insert Table 1 here

---

### Hypothesis Two: Equivocal Situations Involving Positive and Negative Emotions Versus Only Negative Emotions

To determine whether positive/negative dimensions and specific pairs of emotions contrasted affected scores on the measure, scores were analyzed using a nested within-subjects ANOVA design (emotion contrast pairs nested within positive/negative dimension; see Table 2). Results indicated that, in vignettes contrasting positive and negative emotions, preschoolers were indeed more able to utilize the personal information regarding the puppet.

---

Insert Table 2 here

---

Hypothesis Three: Differences Among Specific Emotions Within Positive/Negative Emotion Contrasts

There was also a significant overall effect for the nested contrast pair factor for certain emotion pairs young children were more able to use personalized information. Planned contrasts for within-subjects designs indicated that vignettes involving fear were most difficult.

A categorical examination of egocentric responses also indicates that subjects were more likely to perform egocentrically when the emotions pairs being contrasted included fear ($\chi^2$ = 36.52, $p < .001$). Of those emotion pairs that included fear, the sad/afraid pair was most likely to elicit an egocentric response ($\chi^2$ = 15.33, $p < .01$).

## Discussion

These results concur with those reported by Gnepp et al. (1986), where kindergarteners responded to equivocal situations correctly over 60% of the time, and abilities to use personalized information increased with age through sixth grade. This study confirms these trends with younger subjects. These subjects accurately identified emotions in equivocal situations approximately 67% of the time.

Contextualized measurement (Author, 1986) appeared to make this task accessible to younger preschoolers. It may

be quite important that actual facial and vocal cues were available to the children to aid in their decision making.

Quite often subjects spontaneously verbalized about the process of identifying emotions that differed from their own. At times the children evidenced simple wonderment at the puppets' "odd" perspective (e.g., looking very surprised, or saying, "But why????" "But I love French fries!"; But I love to swim in the water!") They also questioned what was happening, even while indicating the correct emotion (e.g., "Why did the mom say he couldn't touch that?").

At other times their reactions were more complex. For example, one boy, after indicating that the puppet was indeed happy to eat oatmeal, lectured the puppet on its more undesirable qualities, notably its lumps! Some children changed the stories, as in putting the angry face on the dog puppet when the child puppet was afraid, having the girl puppet suck her thumb when she was sad, and saying "they'll bring her some ice cream". It is clear that the children grappled with what they felt were the unusal emotional responses of the puppets.

Happiness/non-happiness is the first differentiation made among both emotional expressions and emotional situations (Author, 1986a, 1986b, 1987; Borke, 1971; Bullock & Russell,

1985; Lewis & Michalson, 1985; Ridgeway, Waters, & Kuczaj, 1985); it is not, therefore, surprising that this developmentally early differentiation is also found in this more cognitively complicated task. Happy expressions and situations may be also accentuated by socializing agents more than negative expressions and situations (Malatesta, 1982).

Young children's slow identification of specific negative expressions and situations would also suggest that vignettes where two negative emotions were contrasted would be more difficult, as was found here. Analyses of kindergarteners' abilities to understand the equivocal nature of emotional situations suggest that, by kindergarten age, children do realize that: (1) there are equivocal situations in which different persons feel different ways; (2) personalized experiences may call for a unique emotional reaction. They fail, however, to apply this general knowledge to specific emotional situations unless prompted to do so (Gnepp, 1987; Gnepp et al., 1986). In particular, stories where the expected personalized/non-personalized emotional reactions were positive and then negative were easier for young children than those which contrasted two negative emotional reactions (Gnepp et al., 1985; similar to main effect of positive/negative dimensions found here).

Stein and Jewett's (1986) model would also support these findings based on dimensions differentiating the causes of happiness, fear, anger, and sadness. In states of happiness, one is focused on attainment of a desired state or avoidance of an undesired state; one anticipates goal enjoyment. In all negative emotional states, one focuses on an undesired state which is eminent.

Thus there is a clear distinction between happiness and the negative emotional states. The differentiation among negative emotional states is, however, more individual, more dependent upon one's interpretation of the situation. For example, although both fear and sadness focus on the consequences to self of an undesired state, one emphasizes loss in sadness, and anticipation of harm, in fear. In the equivocal situation of receiving punishment for misbehavior, for example, some children may focus on the anticipation of harm from a spanking; others on the loss of "face" or of closeness with the parent.

Further, the same situation can cause anger or sadness depending on the individual's focus (e.g., one is angry when one's blocks are knocked down if one focuses on the violation of one's wish by another, or one is sad if one focuses on the loss of the beautiful tower). Thus it is logical, from the dimensional perspective of Stein and

Jewett, that: (1) there should be a main effect of emotion, with comparisons including positive emotion being the easiest; and (2) the emotion contrast pairs involving two negative emotions, especially where fear was involved, should in fact be the most difficult.

The oft-repeated finding that fear is one of the last negative emotions to be accurately identified can possibly explain these findings (Lewis & Michalson, 1985). Planned contrasts show that any comparison where fear is involved is more difficult, over and above the positive/negative dimension.

The hypotheses addressed above were supported. More research on the substantial affective knowledge of preschool children is needed to address certain issues, such as more finely delineating young preschoolers' differentiation of negative emotions.

References

Borke, H. (1971). Interpersonal perception of young children: Egocentrism or empathy? Developmental Psychology, 5, 263-269.

Bullock, M., & Russell, J. A. (1985). Further evidence on preschoolers' interpretation of facial expressions. International Journal of Behavioral Development, 8, 15-38.

Chandler, M. J., & Greenspan, S. (1972). Ersatz egocentrism: A reply to Helene Borke. Developmental Psychology, 7, 104-106.

Author. (1986a). Social cognition, prosocial behavior, and emotion in preschoolers: Contextual validation. Child Development, 56, 197-201.

Author. (1986b). Understanding of emotion and prosocial reaction in emotion. Poster presented at the annual meetings of the American Psychological Association, Washington, DC.

Author. (1987, August). Preschoolers' identification of others' emotions in equivocal situations. Poster presented at the annual meetings of the American Psychological Association, New York.

Gnepp, J. (1983). Chidren's social sensitivity: Inferring emotions from conflicting cues. Developmental Psychology, 19, 805-814.

Gnepp, J. (1987). Children's understanding of emotional reactions: Inferring appraisals from prior experience and behavior. Paper presented at the biennial meetings of the Society for Research in Child Development, Baltimore.

Gnepp, J., & Gould, M. E. (1985). The development of personalized inferences: Understanding other people's emotional reactions in light of their prior experiences. Child Development, 56, 1455-1464.

Gnepp, J., McKee, E., & Domanic, J. A. Children's use of situational information to infer emotion: Understanding emotionally equivocal situations. Developmental Psychology, 23, 114-.

Michalson, L., & Lewis, M. (1985). What do children know about emotions and when do they know it? In M. Lewis & C. Saarni (Eds.), The socialization of emotions (pp. 117-139). New York: Plenum Press.

Ridgeway, D., Waters, E., & Kuzaj, S. A. (1985). Acquisition of emotion-descriptive language: Receptive and productive vocabulary norms for ages eighteen months to six years. Developmental Psychology, 21, 901-908.

Shantz, C. U. (1983). Social cognition. In J. H. Flavell & E. M. Markman (Eds.), Cognitive development, volume II in P. H. Mussen (Eds.), Carmichael's manual of child psychology, 4th edition (pp. 34-44). New York: Wiley.

Stein, N. L., & Jewett, J. L. (1986). A conceptual analysis of the meaning of negative emotions: Implications for a theory of development. In C. Izard & P. Read (Eds.), Measurement of emotion in infants and children (pp. 238-268). Cambridge: Cambridge University Press.

Strayer, J. (1986). Children's attributions regarding the situational determinants of emotion in self and others. Developmental Psychology, 22, 649-654.

Table 1

Means and Standard Deviations for Emotion Comparisons

| Emotion Comparison Pairs | Mean | Standard Deviation |
|---|---|---|
| Happy/Sad [a] | 1.80 | 0.51 |
| Happy/Angry | 1.61 | 0.66 |
| Happy/Fear | 1.20 | 0.80 |
| Sad/Angry | 1.54 | 0.73 |
| Sad/Fear | 0.96 | 0.71 |
| Angry/Fear | 0.93 | 0.82 |

[a] Scores based on two items, each contrasting the two emotions (one egocentric choice, one non-egocentric); non-egocentric score = 1, egocentric score = 0. Highest possible score = 2.

Table 2

Summary of ANOVA Results

| Factor | E | p < |
|---|---|---|
| **Main Effects** | | |
| Positive vs. Negative Emotions | 136.67[a] | .001 |
| Nested Contrast Pair | 126.80[b] | .001 |
| **Planned Contrasts** | | |
| Happy/Sad vs. Happy/Afraid | 23.07[a] | .001[c] |
| Happy/Angry vs. Happy/Afraid | 13.99 | .001 |
| Happy/Sad vs. Happy/Angry | 3.78 | ns |
| Sad/Angry vs. Sad/Afraid | 24.80 | .001 |
| Sad/Angry vs. Angry/Afraid | 13.87 | .001 |
| Angry/Afraid vs. Sad/Afraid | 0.03 | ns |

[a] d. f. = (1, 43). [b] d. f. = (4, 172). [c] All contrasts significant at p < .001 would still be significant if a Bonferroni correction were used.

## Appendix

### Twelve Equivocal Emotional Situations

1. Coming to preschool Happy Sad

2. Going to the airport, seeing the airplanes, etc., but also seeing a parent off on a trip.

   Happy Sad

3. What is your child's favorite food that makes him/her very happy?

   _____

4. Coming in from playing outside when you call him/her for dinner.

   Happy Angry

5. Seeing a big although friendly dog. Happy Afraid

6. Going into the water at the swimming pool. Happy Afraid

7. Some other kids would not let him/her play. Angry Sad

8. (S)he is told that (s)he has to stay home while everyone else in the family goes to get ice cream.

   Angry Sad

9. A brother or sister punches her/him, and says that if (s)he tells Mom or Dad, they will hit her/him again.

   Angry Afraid

10. Getting a spanking. Angry Afraid

11. After doing something naughty, a parent says if they do it again, they will have to be punished Sad Afraid

12. Experiencing the death of a pet, a fairly close friend, or a member of the extended family. Sad Afraid